# EPA ERT Air Sampling Plan to Evaluate Gulf Dispersant Application – 14MAY2010

## Purpose:

The following air sampling plan is being developed to assess the impact of the air application of Gulf dispersant COREXIT® 9500 and COREXIT(R) EC9527A on public health. The primary concern is with the off-gassing of the dispersants from the impacted seawater and the treated oil as it migrates on shore and into populated areas.

#### Overview:

One to three sample sets per a day will be taken from the deck of the M/V WARRIOR starting on 5/16/10 through 5/18/10 for 3 days by EPA ERT Duane Newell and ERT contractor Joe Brandine in the Gulf next to the oil after the dispersant is applied to determine a worse case scenario. Shoreline samples maybe taken if oil/dispersant is present on the beach or in the water just offshore. Additional samples may be collected if lab results detect constituents at levels of concern, if additional opportunities arise where oil/dispersant is present on the beach or in the water just offshore, or if directed to. The EPA mobile Trace Atmospheric Gas Analyzer (TAGA) will conduct real time monitor on public roads near the impacted shore line for 2-butoxyethanol and propylene glycol starting on 5/17/10 or 5/18/10. 2-butoxyethanol is a candidate for Corexit EC 9527A and propylene glycol is a candidate for Corexit EC 9500A.

### Sampling Procedures:

### **Boat Deck**

Boat deck air sampling will be conducted following NIOSH method 1403 for 2-butoxyethanol using SKC sampling pumps connected via flexible tubing and equipped with 150 mg solid absorbent glass tubes. All sampling locations will be chosen and collected as per the Work Assignment Manager's (WAM) recommendation. The sampling pumps will be calibrated at 0.2 mL/min and samples will be collected for 50 min for a total volume of 10 liters following ERT SOP 2008.

Air sampling will be conducted following NIOSH method 5523 for propylene glycol using SKC sampling pumps equipped with XAD-7 OVS tubes. The sampling pumps will be calibrated to 1.2L/min and samples will be collected for 50 minutes for a total volume of 60 liters following ERT SOP 2008.

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laboratory for analysis following EPA method TO-15. ERT SOP 1704 shall also be followed for the SUMMA sampling.

One surface water sample and one oil sample will be collected for 2-butoxyethanol and propylene glycol during the air sampling per ERT SOP 2013. As there are no certified methods for these analytes, the samples shall be analyzed per EPA's current water sampling analysis methods for dispersant.

Extracts will be saved for 30 days in case further analysis is needed or requested to confirm 2-butoxyethanol by GC/MS. All data will be placed into scribe per Draft Horizon DMP 050510. During shoreline sampling, meteorological data will be collected using an on-site weather station.

#### **TAGA**

The TAGA will conduct real time monitor on public roads near the impacted shore line for 2-butoxyethanol and propylene glycol starting on 5/17/10 or 5/18/10. The general theory of the TAGA 6000E MS/MS utilizes the technique of triple quadrupole MS/MS to differentiate and quantitate compounds. Operations and sampling shall follow ERT SOP 1711.

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